Summersville Hydroelectric Facility

October 25, 2022

Summersville
City of Summersville, WV

Clean Energy Production with Summersville Hydro

- Summersville Hydro History
- Issues
  Solutions
  Benefits
- We need your help

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Summersville Hydroelectric Project

- History: Summersville Hydroelectric Project
  - ACOE dam completed in 1967
  - Hydro plant completed and commissioned in July 2001
  - 50-year FERC license through 2042;
  - Average annual generation is approximately 200Gwhrs.
  - Constructed powerhouse consists of two 40 MW turbine-generator units.
  - Currently reviewing feasibility of installing a Low Flow Unit.
  - Turbines operate on flows of 600 to 4,300 cfs at Summersville Lake Dam. Outflows above 4,000 cfs are released via Howell-Bunger fixed cone dispersion valves.
  - Annual support to other entities, WVDNR, trout stocking, recreation, and Federal, State and local government. Pay FERC annual fees averaging $496,000, based on annual generation. About 70% of this money is compensation for use of the Federally-owned Summersville Dam.

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Issues, Solutions, Benefits

- **Issues:** *Current Policy and Guidelines waste resources for clean green energy*
  - Fixed date of Apr. 1 lake refill can miss a timely refill of Summersville Lake with snow melt.
  - Clean energy is lost by strictly maintaining summer and winter lake elevations, i.e.. hydro units are bypassed, even when no risk of flood exists.
- **Solutions:** *Update policies and guidelines to be based on current technology and operating data*
  - Use of modern models and forecasting to set the optimum refill date rather than adhere to fixed date.
  - Use of modern models and forecasting for storm water releases.
  - Expedite authorized study/evaluation by Water Reform and Development Act of 2020 (WRDA)
  - Raise Winter Pool 50 feet. The ACoE did their own study in 1981 that revealed winter pool level could be increased more than the 50 feet we currently are asking for
- **Benefits:** *Additional renewable energy for 4500 homes each year*
  - Raising the winter pool as much as 50 feet can generate an additional 30Gwhs, while slowing flood release (not bypassing hydro) could generate an additional 15Gwhrs of renewable power on an annual basis; the addition of 45 Gwhrs could supply 4500 homes annually.

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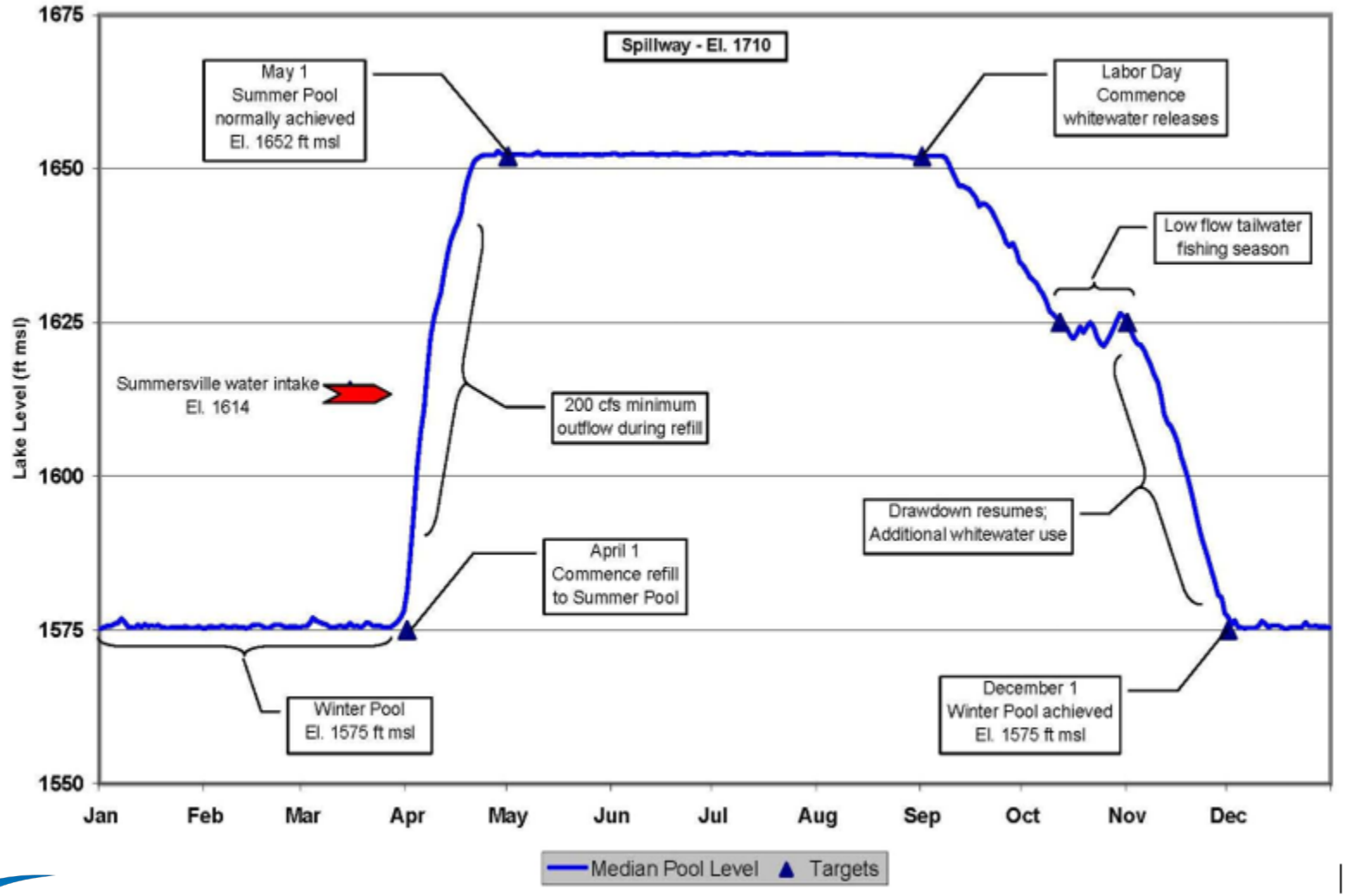
Lake Level Fluctuations



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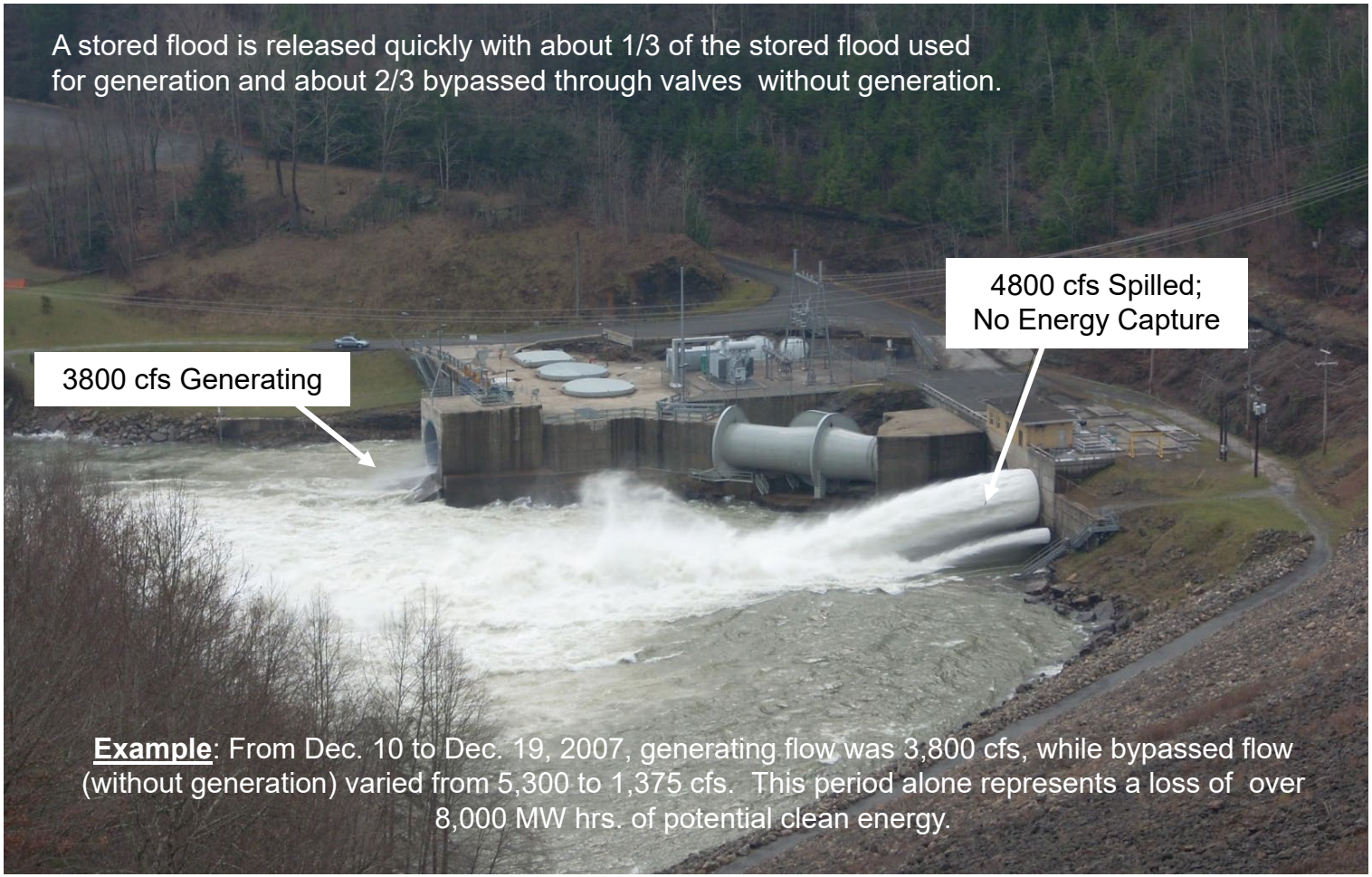
Bypass Events – lost clean energy each year



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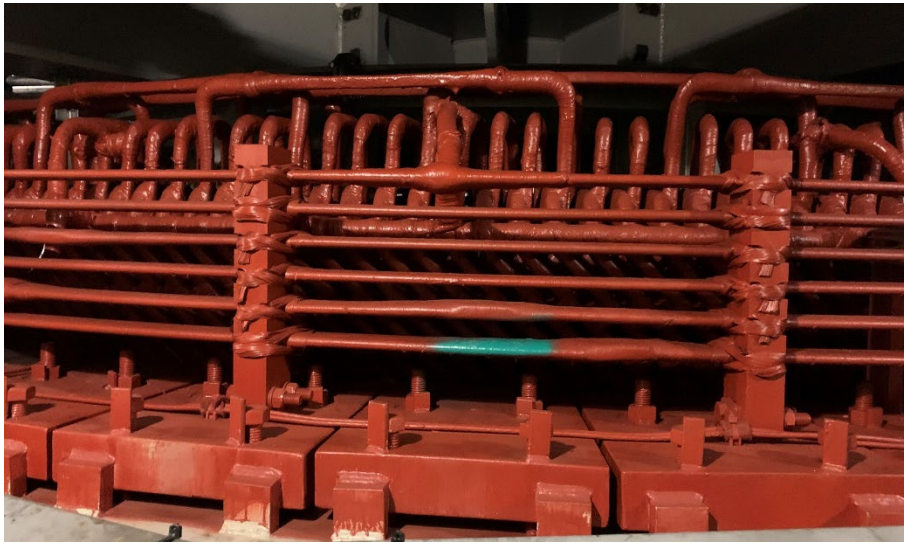
Entry level - Main floor

Generator



Battery Charger

Control Room

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